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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,057	02/25/2004	Paul M. Julich	GEH01 057	8932
7590 Patrick D. McPherson Esquire, Duane Morris LLP Suite 700 1667 K Street, N.W. Washington, DC 20006			EXAMINER BEHNCKE, CHRISTINE M	
			ART UNIT 3661	PAPER NUMBER
			MAIL DATE 12/12/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/785,057

Applicant(s)

JULICH ET AL.

Examiner

Christine M. Behncke

Art Unit

3661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 September 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-18 and 34 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 9, 11, 19-33 and 35-37 is/are rejected.
- 7) ☒ Claim(s) 4, 6, 7, 9 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

This office action is in response to the Amendment and Remarks filed 10 September 2007, in which claims 1-37 were presented for examination.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-37 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 19 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by MacPhail, US 2003/0060966.

MacPhail discloses a method of scheduling the movement of vehicles along a network of track, wherein the network is divided into plural planning areas and a local movement plan is generated for each planning area (figure 1, [0026]), the improvement wherein each local movement plans is generated independently from the other movement plans ([0013]) and wherein each local movement plans is generated asynchronously from the other movement plans ([0047]).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 19, 20, 21, 28, 29 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Gottshlich, US 5,823,481.

(Claims 19 and 20) Gottshlich discloses a method of scheduling the movement of trains along a network of tracks, wherein the network is divided into plural planning areas (figure 3) and a local movement plan is generated for each planning area (column 5, lines 7-14), the improvement wherein each local movement plans is generated independently from the other movement plans (column 5, lines 7-14); and wherein each local movement plans are generated asynchronously from the other movement plans (column 5, lines 7-14).

(Claim 21) Gottshlich further discloses a method of scheduling the movement of plural trains along a network of track, wherein the network comprises a plurality of track configurations and is divided into a plurality of planning areas (figure 3, column 4, lines 57-64), the improvement where the boundaries of the planning areas are selected as a function of the configuration of the track that is common to adjacent planning areas (column 4, lines 57-64, column 2, lines 28-42).

(Claims 28, 29, 31) Gottschlich describes a method of planning the movement of plural trains in two adjacent planning areas, where the adjacent planning areas contain at least one boundary element having common track resource such that only one of the

plural trains may use the boundary element at a time (figures 4a-e), comprising determining the sequence of movement of the plural trains through the boundary element (column 11, lines 48-67), and generating a local movement plan for each of the adjacent planning areas as a function of the determined sequence of movement of trains through the boundary element (column 5, lines 7-14).

(Claim 30) Gottschlich further describes wherein the generating a local movement plan for one of the planning areas is independent of the generation of the local movement plan for the adjacent planning area (column 5, lines 7-14).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5, 8, 11, 26, 27, 32, 33, and 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gottschlich, US 5,823,481, in view of MacPhail, US 2003/0060966.

(Claims 1, 8, 26, 27, 32, 33, and 35-37) Gottschlich describes a method of controlling the movement of plural trains along a network comprising: dividing the network into plural planning areas (figure 3), with each pair of adjacent planning areas sharing at least one common boundary element on track common to the adjacent pair of planning areas (column 2, lines 28-42); developing a local movement plan for each planning area independently of the movement plan for other planning areas to control

the movement of trains into and out of the selected boundary elements associated with the planning area (column 5, lines 7-14). Gottschlich describes wherein the independent controllers evaluate conflicts through a request/reply communication, seeking permission on a section by section basis. Gottschlich does not teach evaluating the local movement plans for adjacent planning areas to identify conflicts. However, MacPhail teaches a hierarchical traffic control system wherein a primary controller evaluates the movement plans of the secondary separate regional controllers (figure 1). The regional controllers independently of each other control the traffic of their region ([0026]), and the primary controller evaluates the local movement plans for adjacent secondary controllers to identify and resolve conflicts at the respective boundaries of the areas ([0011], [0038]). MacPhail further teaches modifying the local movement plans for the planning areas to resolve the identified conflicts ([0026]). It would have been obvious to one of ordinary skill in traffic management to combine the separate/independent traffic control system of Gottschlich with the hierarchical, separate but connected traffic control system, because as MacPhail suggests the hierarchical control system allows for effective local control over individual vehicles, and allows for overall traffic management of all the local areas ([0038]) to prevent perpetuating traffic instability ([0005]).

(Claims 2) Gottschlich further describes monitoring the actual movement of the plural trains over the network of track (column 5, line 47-column 6, line 3); and periodically updating the local movement plans as a function of the actual movement of the trains (column 5, line 47-column 6, line 3).

(Claims 3 and 11) Gottschlich further describes wherein developing a local movement plan for each planning area is performed asynchronously with the development of the movement plans for other planning areas (column 5, lines 7-14).

(Claim 5) Gottschlich further describes wherein the network of track comprises plural configurations of track and the step of dividing comprises selecting boundary elements as a function of the configuration of the track common to adjacent planning agents (column 2, lines 29-48).

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 22-25 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 22 comprises a "computer program to develop a movement plan" however no where in the claim is the computer program claimed to be on a computer readable medium.

***Allowable Subject Matter***

Claims 12-18 and 34 are allowed.

Claims 4, 6, 7, 9, 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine M. Behncke whose telephone number is (571) 272-8103. The examiner can normally be reached on 8:30 am- 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G. Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CMB

